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The Physics and Forecasting of Separation Phenomena in the Philippine Archipelago

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LONG-TERM GOALS

To explore and understand some basic elements of the circulation in the Philippine Archipelago.

OBJECTIVES

Determine the direction and magnitude of flows in the various straits and identify regions of special interest (flow separation, strong internal wave activity, overflows etc.) that warrant special attention. Also determine the driving mechanisms and regions of influence in the strait.

APPROACH

Coordinate with ongoing cruise data and with modelers in order to interpret data and formulate models.

WORK COMPLETED

Since funding arrived only 6 months ago, and the first cruise was completed only 3 months ago, we are still in the formulation stage. In particular, we are attempting to formulate a model of the Bohol Sea as an estuary.

RESULTS

We have developed a new, generalized composite Froude number which should aid in the interpretation of data from overflow regions.

IMPACT/APPLICATION

The generalized Froude number should provide a shipboard tool for evaluation of data.

TRANSITIONS

The generalized composite Froude number will be of use at various sites throughout the oceans.

RELATED PROJECTS

None

REFERENCES

Pratt, L. J. A composite Froude number for a two-layer flow with transverse variations in velocity and depth. (In preparation.)